



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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MAR 20 2001

Ref: 8EPR-EP

Dr. Thomas Steinberg, Chair
Water Quality Control Commission
4300 Cherry Creek Drive South
Denver, CO 80222-1530

Subject: EPA Action on Revisions to the
Water Quality Standards for the South Platte
River Basin

Dear Dr. Steinberg:

The U.S. Environmental Protection Agency (EPA) has completed its review of the revisions to Regulation # 38 adopted by Colorado's Water Quality Control Commission (Commission). These revisions addressed the classifications and standards applicable to the South Platte River basin, the Laramie River basin, the Republican River basin, and the Smoky Hill River basin (the South Platte River basin). The revisions were adopted by the Commission on February 13, 2001 (effective June 20, 2001) and submitted to EPA Region 8 for approval with a letter dated February 28, 2001. The letter included an opinion signed by Colorado's Attorney General certifying that the standards were duly adopted pursuant to State law. Receipt of the letters initiated EPA's review pursuant to § 303(c) of the Act. EPA has completed its review of these revisions, and this letter is to notify you of our action.

The Region commends the Commission and the Water Quality Control Division (Division) for the significant improvements to the water quality standards adopted during this rulemaking action. Revisions that are especially commendable include: numerous updates and additions to the numeric standards for individual segments, Outstanding Waters protection for six additional segments, addition of the water supply designated use for five segments, and deletion of ambient-based standards for five segments (replaced with table values). These revisions were well supported by the evidence compiled by the Division and the parties, and we congratulate both the Commission and the Division for these significant improvements to the standards for the South Platte River basin.

The Region would also like to thank the Commission and the Division for achieving very significant progress toward resolving the outstanding EPA disapproval issues for the South Platte River basin. For Big Thompson River Segment 13, which was disapproved by EPA previously because an aquatic life use was not designated, a Class 2 warm water aquatic life classification was adopted. For Clear Creek Segment 5, which was disapproved previously because the site-specific numeric standards for manganese were not sufficiently protective, revised numeric standards were adopted. And for the vast majority of segments that were disapproved by EPA



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previously because primary contact recreation uses were not assigned, either a Class 1 recreation classification was adopted or an adequate use attainability analysis was completed. Previous EPA disapprovals are now still in effect only for Big Dry Creek segment 1 and Clear Creek segment 18b. For these two segments, the Region believes that the current Class 2 recreation classification is not consistent with Clean Water Act requirements. We look forward to working with the Division and the Commission to identify and evaluate options for resolving this issue.

AGENCY REVIEW

Clean Water Act (CWA) § 303(c)(2) requires States and authorized Indian Tribes to submit new or revised water quality standards to EPA for review. EPA is to review and approve or disapprove the submitted standards. Pursuant to CWA § 303(c)(3), if EPA determines that any standard is not consistent with the applicable requirements of the Act, the Agency shall, not later than the ninetieth day after the date of submission, notify the State or authorized Tribe and specify the changes to meet the requirements. If such changes are not adopted by the State or authorized Tribe within ninety days after the date of notification, EPA shall promulgate the needed standard pursuant to CWA § 303(c)(4). The Region's goal has been, and will continue to be, to work closely with States and authorized Tribes throughout the State or Tribal standards revision process as a means to avoid the need for such disapproval and promulgation actions.

TODAY'S ACTION

I am pleased to inform you that today the Region is approving all new or revised water quality standards for the South Platte River basin adopted by the Commission on February 13, 2001. The basis for our approval action is discussed in Enclosure 1. It is important to note that EPA's approval of the State's water quality standards is considered a federal action which may be subject to the Section 7 consultation requirements of the Endangered Species Act (ESA).¹ Section 7 of the ESA states that "all other federal agencies shall ... utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the conservation of endangered species and threatened species..." and "each federal agency ... shall ... insure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical..."

On June 5, 1997, EPA initiated informal consultation with the U.S. Fish and Wildlife Service concerning EPA's review of the State's water quality standards. Our evaluation will include identification of any potential effects to listed or proposed endangered or threatened species which might result from the new or revised water quality standards. EPA's approval of

¹ Where EPA concludes that its approval action will have "no effect" on listed endangered or threatened species, no ESA Section 7 consultation is required and EPA can issue an unconditional approval. In today's action, EPA is making a "no effect" finding for specific water quality standards revisions, and those elements are approved without condition.

the water quality standards revisions, therefore, is subject to the results of consultation under Section 7(a)(2) of the ESA, and completion of the consultation process is a high priority for the Region. Nevertheless, EPA also has a Clean Water Act obligation, as a separate matter, to complete its water quality standards approval action. Therefore, in approving the water quality standards revisions today, EPA is completing its CWA Section 303(c) responsibilities.

Today's action includes a finding that EPA's approval of certain elements of the revised water quality standards will have no effect on listed or proposed endangered or threatened species. For these revisions, no consultation with the U.S. Fish and Wildlife Service is required. As explained above, however, EPA does have ESA responsibilities for the remaining revisions. As a result, the discussion below covers two categories of revisions: (1) revisions approved without condition, and (2) those that are approved, subject to ESA consultation.

The water quality standard approvals in today's letter apply only to water bodies in the State of Colorado, and do not apply to waters that are within Indian Country, as defined in 18 U.S.C. Section 1151. Today's letter is not intended as an action to approve or disapprove water quality standards applying to waters within Indian Country. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities for water quality standards for waters within Indian Country.

APPROVED REVISIONS

EPA has concluded that approval of certain revisions will have no effect on listed or proposed endangered or threatened species. For these revisions, no consultation with the U.S. Fish and Wildlife Service is required. In addition, EPA has concluded that these revisions are consistent with the requirements of the Clean Water Act and EPA's implementing regulations. Accordingly, revisions that are approved without condition include the following:

- All revisions to recreation designated uses.
- All revisions to numeric standards for the protection of recreation uses.
- All revisions to water supply designated uses.
- All revisions to numeric standards for the protection of water supply designated uses.
- All revisions to human health-based numeric standards.

APPROVED REVISIONS, SUBJECT TO ESA CONSULTATION²

With the exception of the provisions approved without condition, above, the remaining revisions are approved for purposes of CWA Section 303(c), subject to the results of consultation

² Included in the "subject to ESA consultation" category are a number of water quality standards provisions which may not be relevant to the protection of endangered or threatened species. EPA Region 8 plans to work with the U.S. Fish and Wildlife Service to identify those categories and to develop an appropriate strategy to ensure timely EPA approval actions.

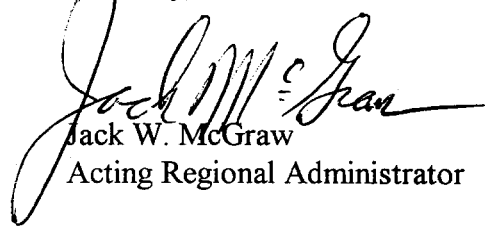
under Section 7(a)(2) of the ESA. Should the consultation process with the U.S. Fish and Wildlife Service identify information that supports a conclusion that one or more of the revisions in this category are likely to jeopardize the continued existence of any listed endangered or threatened species, or result in the destruction or adverse modification of designated critical habitat of such species, the Region will revisit and revise, as necessary, its approval decision for the identified water quality standards. Revisions that are approved subject to ESA consultation include the following:

- All revisions to aquatic life designated uses.
- All revisions to the numeric standards for the protection of aquatic life uses.
- All revisions to agriculture designated uses.
- All revisions to numeric standards for the protection of agriculture uses.
- All other revisions, including the adoption of temporary modifications, Outstanding Waters classifications, and Use Protected classifications, and revisions that resulted in the re-segmentation, re-naming and consolidation of segments.

CONCLUSION

EPA Region 8 congratulates the Commission and the Division for the significant improvements to the water quality standards for the South Platte River basin. The Region looks forward to working with the State to make additional improvements to the standards for this basin. If you have questions concerning this letter, please call me or Max Dodson, Assistant Regional Administrator, Office of Ecosystems Protection and Remediation at 303-312-6598, or have your staff contact David Moon at 303-312-6833 or Bill Wuerthele, Regional Water Quality Standards Coordinator, at 303-312-6943.

Sincerely,



Jack W. McGraw
Acting Regional Administrator

Enclosure

cc: J. David Holm, Director, Water Quality Control Division
Fred Leutner, Chief, Standards Branch, EPA Headquarters (4305)

**RATIONALE FOR EPA'S ACTION ON THE REVISIONS TO THE
WATER QUALITY STANDARDS FOR THE
SOUTH PLATE RIVER BASIN**

This enclosure provides EPA's rationale for today's action. The discussion below is organized as follows: (1) revisions approved without condition, (2) revisions that are approved, subject to ESA consultation, and (3) status of previous EPA disapproval actions.

APPROVED REVISIONS

EPA has concluded that approval of certain revisions will have no effect on listed or proposed endangered or threatened species. For these revisions, no consultation with the U.S. Fish and Wildlife Service is required. In addition, as discussed in more detail below, EPA has concluded that these revisions are consistent with the requirements of the Clean Water Act and EPA's implementing regulations. EPA approves these revisions without condition.

Recreation Designated Uses

The Region appreciates the efforts of the Commission, the Division, and the parties to resolve the issues that necessitated EPA's July 16, 1992 disapproval action regarding Recreation Class 2 waters. Significant efforts were made in a number of cases to gather information, review the facts and identify appropriate recreation classifications for waters in the South Platte River basin. For the majority of the segments that were disapproved by EPA in 1992, in this rulemaking the Commission changed the recreation classification, for all or a portion of the year, from Recreation Class 2 to either Recreation Class 1a or, for one segment, Recreation Class 1b. Clearly, the Commission acted to designate primary contact recreation uses for most of the disapproved segments. In each of the cases where a Recreation Class 2 use was retained, a use attainability analysis was completed consistent with the new requirement in the Basic Standards and Methodologies for Surface Waters (at Section 31.13(1)(a)(i)) and the federal requirement (see 40 CFR 131.10(j)). The approach to recreation use classification adopted by the Commission and implemented during this rulemaking is fully consistent with federal requirements and guidance, and constitutes a major improvement in Colorado's standards-setting process.

In reviewing the segments where a Recreation Class 2 use was *retained* by the Commission, the Region carefully considered the site-specific information reported in the use attainability analyses, as well as other evidence submitted by the parties. In several instances, Regional staff also visited segments where a Recreation Class 2 use was retained. The Region's review addressed two principal questions:

- (1) Was a use attainability analysis (UAA) completed?
- (2) Does the UAA adequately demonstrate that primary contact recreation is not an existing or potential use of the segment(s) in question?

There are a number of factors that are important to consider in identifying appropriate recreation classifications. These factors were identified and discussed by the Region in our 1992 guidance document: *Recreation Standards and the CWA Section 101(a)(2) "Swimmable" Goal*. Below, we have listed the factors that were especially significant (i.e., determinative) for purposes of today's EPA action, and summarized the decision criteria that we applied. Note that the discussion below does not address all possible factors that might provide a basis for a Recreation Class 2 designated use, but rather is intentionally limited to the factors that were significant to our decision today regarding the particular cases where a Recreation Class 2 use was retained in this rulemaking action.

Existing Recreation Uses

If there are existing primary contact recreation uses of the water body, such uses must be designated pursuant to the State's process for assigning use classifications (see Section 31.6 of the Basic Standards) and federal requirements (see 40 CFR 131.10(i)). As discussed in the Advance Notice of Proposed Rulemaking published by EPA on July 7, 1998, the Agency would not necessarily consider a primary contact use by a few people on a few occasions to be an existing use, if the water body lacks the physical features or water quality necessary to support and protect such uses (see 63 *Federal Register* 36752-36753).

In each of the cases where a Recreation Class 2 designated use was retained in this rulemaking action, the use attainability analysis concluded that there are no existing primary contact recreation uses of the segment.

Potential Recreation Uses

If there is a reasonable potential for primary contact uses to occur within a 20 year period, such uses must be designated pursuant to the State's process for assigning use classifications (see Sections 31.6 and 31.13(1)(a)(i) of the Basic Standards). This approach has been approved by EPA as consistent with federal requirements, which generally also require that the highest attainable uses be designated. For example, if current water quality conditions are not sufficient to support primary contact uses, but the problems can be corrected within 20 years and there are no other factors precluding the use, then primary contact recreation is a potential use and must also be a designated use under State and Federal requirements. A use attainability analysis must be conducted for waters which lack standards that protect primary contact uses. For purposes of today's action, factors other than water quality that were especially important in determining whether primary contact recreation activities may reasonably be expected to occur included the following:

- *Water Body Access.* Access to a water body (generally, the ability of the public to get to a particular segment) is determined by various factors, including roads, trails, bike paths, fences, use restrictions, etc. For example, if people are physically restricted from getting to the water by a tall fence and a locked gate, the Region considered this fact to support a conclusion that primary contact uses are not attainable in that portion of the water body. On the other hand, if a park or bike path is located adjacent to the water body, this fact increases the likelihood that the water body will be used for primary contact recreation. The Region considered a sign and/or City ordinance (e.g., prohibiting swimming) to be a significant factor that would discourage, but not necessarily preclude, primary contact recreation activities.
- *Location.* Waters located in populated areas, for example, are much more likely to provide primary contact recreation opportunities. Such opportunities may include uses by the children that live nearby. For example, even in waters with flows or water levels that preclude other types of primary contact recreation (swimming, etc.), children may engage in dam building, splashing, water fights, and other activities. Unless precluded by other factors (such as access), such recreational activities by children could result in full body contact with the water, ingestion of small quantities of water, and exposure to pathogens, indicating a need to designate a primary contact recreation use. Where a water body is located in a populated area, the Region considered this fact a very strong indication that primary contact recreation uses may potentially occur.
- *Low flows or water levels.* The Region believes that primary contact recreation uses may potentially occur in any segment with flows or depths sufficient for total body immersion in a prone position. On the other hand, for segments that dry up completely or have very shallow flows, the Region believes it is acceptable to conclude that primary contact uses are precluded. Clearly, Section 131.10(g)(2) of the water quality standards regulation identifies “low flows or water levels” as an acceptable basis for concluding that a use is not attainable. But implementation decisions are complicated by the fact that channel shape and water depths are variable both laterally and longitudinally, and by the seasonal nature of flow conditions in many waters. In reviewing the UAAs, the Region considered segments characterized by base flows deep enough for total body immersion (i.e., at multiple locations, but not necessarily everywhere in the segment) to have a clear potential for primary contact recreation. In segments that meet this test, the Region believes that primary contact recreation uses generally are not precluded by low flows or water levels. In segments that do not meet this test, there is clearly *some* potential that recreational activities resulting in ingestion of water might possibly occur anyway, particularly in populated areas, but the Region believes it is appropriate to defer to the Commission to make a risk management decision regarding the appropriate recreation use classification in such cases.
- *Seasonal Uses.* EPA policy is that it is acceptable to adopt seasonal primary contact recreation uses consistent with the existing and potential uses of the water body. One

constraint is that the water quality criteria which are applied can not prevent the attainment of more restrictive uses in other seasons. See page 2-6 of the Water Quality Standards Handbook: Second Edition (EPA, 1994).

- *Large Segments.* Several of the segments where Recreation Class 2 uses were retained by the Commission are large segments. It is possible that, within a large segment, primary contact recreation uses might be attainable, but only in a portion of the segment. Where the facts indicate a reasonable potential for primary contact uses to occur, but only in a portion of the segment, the Region considered primary contact recreation to be the appropriate classification. Re-segmentation may be appropriate in such cases so that primary contact recreation uses can be designated only for the portion of the segment where such uses have a reasonable potential to occur.

Summary of the Revisions to Recreation Uses and the Basis for EPA's Action

Segments where the recreation designated use was upgraded from Class 2 to Class 1a include: Upper South Platte segments 1a, 1b, 4, 5a, 5b, 5c, 7, 9, 10a, 10b, 11a, 14, 15, 16a, 16b, 16c, and 17a, Cherry Creek segments 1, 3, and 4, Bear Creek segments 1a, 1b, 2, 3, 4a, 5, and 7, Clear Creek segments 1, 5, 8, 12, 13a, 13b, 14b, 15, 16a, and 17b, Big Dry Creek segment 4a, Boulder Creek segments 1, 3, 5, 6, 7a, 7b, 8, 10, and 11, Saint Vrain segments 1, 2, 3, 5 and 6, Middle South Platte segments 1, 3 and 4, Big Thompson segments 4a (May 1 - October 15), 4b (May 1 - October 15), 4c (May 1 - October 15), 6, 9, 10 and 14, Cache La Poudre segments 7, 8, 10, 11, 12, 13a, 15, and 16, Lower South Platte segments 1 and 2b, and Republican segments 1, 3, 4 and 5. These upgraded recreation classifications are consistent with the federal requirements found in Section 131.10 of the water quality standards regulation. EPA approves these revisions, without condition.

For Big Thompson River segment 5, the Recreation Class 2 use was upgraded to a Recreation Class 1b use from May 1st to October 15th of each year. A Recreation Class 2 use was retained for the remainder of the year. The evidence submitted to the Commission was reviewed by the Region and we have determined that these seasonal recreation use classifications are appropriate. EPA approves the revisions to the recreation classification of Big Thompson River segment 5, without condition.

Segments Where a Recreation Class 2 Use Was Retained

There were a total of 20 segments where a Recreation Class 2 use was retained for all or a portion of the year. For 18 of these segments, the Region believes that retaining a Recreation Class 2 designated use is appropriate. For Big Dry Creek segment 1, the Region believes that a Recreation Class 1 use is required. For Clear Creek segment 18b, the Region believes that a Recreation Class 1 use is required for at least a portion of the segment. These segments are addressed separately below. For the remaining 18 segments, the Region agrees with the Commission's decision to retain a Recreation Class 2 use and considers EPA's 1992 disapproval

action to be resolved. Generally, the UAAs for these 18 segments concluded that there are no existing primary contact recreation uses in these segments, and no reasonable potential for primary contact uses to occur within a 20 year period. However, these UAAs must be reviewed every three years, and if new information indicates that primary contact recreation uses are attainable, then Recreation Class 1 uses will need to be designated (see 40 CFR 131.20). The findings of the Region regarding these 18 segments are as follows:

- For Big Thompson River segments 4a, 4b, 4c, and 5, the Region agrees that primary contact recreation uses are precluded on a seasonal basis. A Recreation Class 2 designated use was retained on these segments for the period extending from October 16th to April 30th based on use attainability analyses completed by the City of Loveland. The Region concurs that seasonal flow and temperature factors preclude primary contact recreation on a year-round basis.
- For Big Dry Creek segments 4b and 5, Lower South Platte River segment 2a, and Republican segments 6 and 7, the Region agrees that primary contact recreation uses are precluded. A Recreation Class 2 use was retained for these segments based upon use attainability analyses completed by the Water Quality Control Division. The Region concurs that access and/or ephemeral flow conditions preclude primary contact recreation uses. The Big Dry Creek segments are located in an area (the Rocky Flats site west of Denver) that is fenced and guarded, and therefore is not accessible. In the other segments, the Region agrees that primary contact recreation use is precluded by ephemeral stream flows.
- For Cache La Poudre segment 13b and Middle South Platte segment 5, the Region agrees that primary contact recreation uses are precluded. A Recreation Class 2 use was retained based on use attainability analyses completed by the North Front Range Water Quality Planning Association (NFRWQPA). The UAAs reflect the NFRWQPA's impressive efforts to identify existing uses of these waters, including a survey of local high school students. The UAAs also identify low flow and access considerations that preclude primary contact recreation uses.
- For Clear Creek segments 7, the Region agrees that primary contact recreation uses are precluded. A Recreation Class 2 use was retained based on a use attainability analysis completed by Climax Molybdenum Company. The UAA cites several factors including the fact that most of the segment is underground in a 6-foot pipe and that access is limited by a locked gate. This segment lies completely within the Climax Molybdenum Company property boundary.

- For Clear Creek segments 14a, the Region agrees that primary contact recreation uses are precluded. A Recreation Class 2 use was retained based on a use attainability analysis completed by Coors Brewing Company. The Region agrees that access constraints preclude primary contact recreation uses. This segment lies on Coors property, and the property boundary is fenced and patrolled by Coors security personnel.
- For Big Dry Creek segment 3, the Region believes that a Class 2 recreation classification falls within the range of options that can be approved under the Clean Water Act. A Recreation Class 2 use was retained based on a use attainability analysis completed by the City of Broomfield. The UAA cites access and water quality considerations which preclude primary contact recreation uses.
- For Clear Creek segments 16b, 17a, and 18a and Big Dry Creek segment 6, the Region believes that a Class 2 recreation classification falls within the range of options that can be approved under the Clean Water Act. A Recreation Class 2 use was retained for these segments based on use attainability analyses completed by the City of Arvada. For Clear Creek segments 16b and 18a, and Big Dry Creek segment 6, the UAAs identify low flow conditions that preclude primary contact recreation uses. For Clear Creek segment 17a (Arvada Reservoir), the UAA cites Arvada's prohibition of primary contact recreation uses (to protect the water supply use of the Reservoir) and the fact that the reservoir is completely fenced.

All of the Recreation Class 2 segments discussed above will need to be reviewed on a triennial basis to determine if there is new information which supports a conclusion that primary contact recreation uses are attainable. Public involvement in the triennial review process is very important to ensure, for example, that the uses which are designated accurately reflect the existing and potential uses of the water body. The federal requirement in Section 131.20 of the water quality standards regulation provides as follows:

Any water body segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act shall be re-examined every three years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly.

Big Dry Creek Segment 1

For Big Dry Creek segment 1, the Region believes that a Recreation Class 1 use is required, and that the current Recreation Class 2 use is not consistent with Clean Water Act requirements. This segment is approximately 33 miles long and consists of the mainstem of Big Dry Creek, including all tributaries, lakes, reservoirs and wetlands, from the source to the confluence with the South Platte River, except for specific listings in segments 2, 3, 4a, 4b, 5, and 6.

On November 30, 2000, Regional staff biked the upper portion of Big Dry Creek segment 1 from the Standley Lake outlet to 128th Street in Westminster. Access to this portion of the segment is facilitated by stream-side parks and a trail/bike path that runs adjacent to the creek. Downstream of Interstate 25, the segment is somewhat less accessible, much of the adjacent land is private property, and the predominant land use is agriculture.

The UAA completed by the City of Broomfield cites several factors that limit the potential for primary contact recreation, including water quality, flow conditions, obstructions along the creek, and regulations/private property. EPA's basis for concluding that these factors do not preclude primary contact recreation is as follows:

- **Water quality:** It is clear that current water quality levels in this segment exceed numeric standards associated with the Recreation Class 1 designated use (1998-1999 geometric mean fecal coliform values ranged from 103 to 820 per 100 ml at 12 sites, with an overall geometric mean of 442 per 100 ml), and that the elevated levels are due to a combination of wastewater discharges and other causes including nonpoint sources. However, the UAA does not successfully demonstrate that it is infeasible to correct the water quality problems within 20 years.
- **Flow conditions:** The Region believes that flows and water depths are sufficient for total body immersion in a prone position. In terms of water depth, the UAA reported that the maximum depth is around one foot under winter low flow conditions (5-15 cfs) and 18 to 22 inches during summer months. Average flows at the (upstream) Westminster gage were reported in the UAA as 49 cubic feet per second (cfs) for June, 39 cfs for July, and 33 cfs for August. For the (downstream) Fort Lupton gage, average flows were reported as 58 cfs for June, 51 cfs for July, and 46 cfs for August. Because some canoeing was reported in the UAA for a small portion of the segment, canoeing should be considered an existing use. The past history of canoeing also indicates that flows and depths are sufficient to allow primary contact recreation to occur. Based upon these data, the Region cannot conclude that low flows or depths preclude primary contact recreation in this segment.
- **Obstructions:** Obstructions reported in the UAA include overhanging trees and logs, culverts, weirs, drop structures, thick riparian vegetation, steep banks, and barbed wire fences (i.e., across the creek). The UAA suggests that these obstructions limit access to the stream and that, coupled with high water velocities (3 to 4 feet per second), such obstructions could pose a hazard to boating, swimming or, in some cases, wading. The Region agrees that, because of the obstructions and other factors such as flow, conditions in the creek are not ideal for some forms of primary contact recreation (e.g., swimming, rafting). But the Region does not agree that obstructions such as "thick riparian vegetation" or "steep banks" reported in the UAA preclude access. Likewise, the presence of an occasional overhanging tree, culvert, drop structure, or fence also does not preclude access. Such features are commonly found in flowing water bodies in Colorado

that have a Recreation Class 1 designated use. There are many stretches of the upper portion of the stream where none of the cited obstructions are present, and access is facilitated by the presence of a bike path running adjacent to the creek. It is clear to the Region that there is ample access to many stretches of the segment, despite the obstructions cited in the UAA.

- Regulations/Private Property: The UAA notes that access to the upper portion of the segment is restricted by City of Westminster regulations and the fact that the land along the lower portion is in private ownership. The City of Westminster has prohibited various activities including swimming, wading or floating devices, and signs providing notice to the public are posted at intervals along the bike path. The Region believes this restriction discourages, but does not preclude, primary contact uses in the portion of the segment located in Westminster. Regarding the private property status of lands along the lower portion of the segment, the Region would agree that the segment is somewhat less accessible downstream of Interstate 25. But the Region does not believe that the lower portion of the segment is completely inaccessible.

Based upon these considerations, the Region believes there is a reasonable potential for primary contact uses to occur within a 20 year period in this segment. Flows and water depths are sufficient for primary contact recreation activities, particularly those by children. Clearly, there are some features that make the segment less than ideal for uses such as rafting or swimming, and prohibitions adopted by Westminster discourage recreational uses. Nevertheless, the Region believes there is ample access to the segment. It is also clear that many people live near the upper portion of the segment. These facts lead the Region to conclude that recreational uses could occur. The Region is particularly concerned regarding potential uses by children. The Region believes that various activities by children could result in full body contact with the water, ingestion of small quantities of water, and exposure to pathogens, and that the potential for such activities necessitates adoption of a Recreation Class 1 designated use for this segment. Accordingly, the Region rejects the conclusion in the UAA completed by the City of Broomfield, and does not concur with the decision to retain a Recreation Class 2 designated use. For this segment, EPA does not consider the 1992 disapproval of the Recreation Class 2 designated use to have been resolved.

Clear Creek Segment 18b

For Clear Creek segment 18b, the Region believes that a Recreation Class 1 use is required for at least the Ralston Creek portion of the segment. For this segment, the Region believes that the current Recreation Class 2 use is not consistent with Clean Water Act requirements. Clear Creek segment 18b consists of the mainstem of Ralston Creek from the Croke Canal Diversion structure to the confluence with Clear Creek and all tributaries to Ralston Creek including all lakes, reservoirs, and wetlands from the source of Ralston Creek to the confluence with Clear Creek, except for waters included in segments 17a, 17b, and 18a.

On December 7, 2000, Regional staff visited Clear Creek segment 18b with the helpful assistance of Mr. Jim McCarthy of the City of Arvada. Several sites were visited, including portions of Leyden Creek, Van Bibber Creek, and Ralston Creek. Most of the segment is located within the City of Arvada. Access is facilitated by stream-side parks and a trail/bike path that is used, e.g., for hiking, biking, horseback riding and roller blading. Van Bibber Creek headwaters in the (rural) mountains of Jefferson County, and is less accessible than Ralston Creek. It is clear to the Region that there is ample access to this segment, particularly the portions adjacent to a trail/bike path. Access was not cited by Arvada as a factor which limits recreational uses.

The UAA completed by the City of Arvada cited several factors that limit the potential for primary contact recreation, including water quality and flow conditions. EPA's basis for concluding that these factors do not preclude primary contact recreation is as follows:

- Water Quality: High levels of *E. coli* have been measured by the City of Arvada at multiple locations in this segment (*E. coli* observations during year 2000 at 4 sites ranged from 100 to 8,000 per 100 ml, or a geometric mean of 599 per 100 ml), and it appears that much of the contamination is from nonpoint sources (e.g., pets, water fowl, horses). However, the UAA does not successfully demonstrate that it is infeasible to correct the water quality problems within 20 years.
- Flow conditions: At Arvada's Ralston Creek monitoring station located behind City Hall and a quarter block east, flow depths of 10 inches or more were reported for 4 different dates during the year 2000 monitoring season. At Arvada's Ralston Creek monitoring station located at 56th Avenue, flow depths of 10 inches or more were reported for 3 different dates during the year 2000 monitoring season. The Region's understanding is that these measurements reflect only the maximum depth at the cross-section of the stream where water quality samples were collected. Flows and depths in Leyden Creek and Van Bibber Creek are lower than in Ralston Creek, and it is not clear whether water depths in these smaller tributaries are sufficient for total body immersion in a prone position. Based upon these facts and the information in the UAA, the Region cannot conclude that low flows or depths preclude primary contact recreation in this segment, particularly with respect to Ralston Creek.

Based upon these considerations, the Region believes there is a reasonable potential for primary contact uses to occur within a 20 year period in this segment, particularly in Ralston Creek. Although flows are not sufficient to support some primary contact activities, the creeks in this segment have perennial flow, and flows are sufficient to allow the stream to be used in various ways by children. There is ample access to many portions of the segment as a result of the trail/bike path. It is also clear that many people live near the segment. These facts lead the Region to conclude that recreational uses could occur in the segment. The Region is particularly concerned regarding potential uses by children. Activities by children could include dam building, splashing, water fights, and other activities. The Region believes that such activities could result in full body contact with the water, ingestion of small quantities of water, and exposure to

pathogens, and that the potential for such activities necessitates adoption of a Recreation Class 1 designated use for this segment. Accordingly, the Region rejects the conclusion in the UAA, and does not concur with the decision to retain a Recreation Class 2 designated use. For this segment, EPA does not consider the 1992 disapproval of the Recreation Class 2 designated use to have been resolved.

Resolving the Disapproval Issue

The outstanding disapproval issue for Big Dry Creek segment 1 and Clear Creek segment 18b can be resolved by applying a Class 1 recreation use and associated numeric standards to these segments. Another option, particularly for Clear Creek segment 18b, would be to evaluate re-segmentation and application of a Class 1 recreation use only as needed to protect existing and potential uses. As discussed in the letter to Jane E. Norton dated June 14, 1999, our preference continues to be to resolve this disapproval issue through a State action and avoid the need for federal promulgation of water quality standards.

Numeric Standards for the Protection of Recreation Uses.

For a number of segments, revisions to the numeric standards for the protection of recreation uses were adopted. For example, on segments where the recreation classification was upgraded from Class 2 to Class 1, numeric standards protective of Class 1 uses were assigned, either on a seasonal or year-round basis. These revisions represent a very significant improvement to the water quality standards for this basin, consistent with the CWA § 101(a)(2) goal. These revisions are consistent with federal requirements at 40 CFR 131.11, because the adopted numeric standards describe a level of water quality that will protect the designated recreation use. EPA approves, without condition, all adopted revisions to the numeric standards for the protection of recreation uses.

Water Supply Designated Uses.

The water supply designated use was added to Clear Creek segments 2, 13a, and 16a, Boulder Creek segment 11, Cache La Poudre segment 8, and Big Thompson segment 4a. In addition, the water supply designated use was added to Cache La Poudre segment 1 and Laramie River segment 1, two segments which are also Outstanding Waters. These revisions are consistent with federal requirements at 40 CFR 131.10 because the adopted designated uses appropriately reflect the existing and potential uses for these waters. EPA approves, without condition, all revisions to water supply designated uses.

Numeric Standards for the Protection of Water Supply Uses.

For some segments, revisions to the numeric standards for the protection of water supply uses were adopted including, for example, all segments where a water supply designated use was added. These revisions are consistent with federal requirements at 40 CFR 131.11 because the

adopted criteria describe water quality levels that will protect the designated use. EPA approves, without condition, all revisions to the numeric standards for the protection of water supply uses.

Human Health-Based Numeric Standards

Human health-based (“water+fish” or “fish ingestion”) numeric standards for organic chemicals were adopted for certain Aquatic Life Class 2 segments, consistent with the Basic Standards and Methodologies for Surface Waters. For Class 2 waters that previously were assigned “additional organics,” revisions were adopted to more specifically apply “water + fish” or “fish ingestion” standards, as appropriate, consistent with last year’s revisions to the Basic Standards. Aquatic Life Class 2 segments where human health-based standards for organics were applied include: Upper South Platte segment 16c, Bear Creek segments 1b, 4a, 4b, 4c, and 5, Clear Creek segments 17a and 17b, Middle South Platte segments 1, 3, and 4, Big Thompson segments 3, 4 and 6, and Cache La Poudre segments 7, 8, 10, 11 and 12. These revisions are consistent with federal requirements at 40 CFR 131.11 because the adopted numeric standards describe water quality levels that will protect designated uses. EPA approves, without condition, all revisions to human-health based numeric standards.

APPROVED REVISIONS, SUBJECT TO ESA CONSULTATION

With the exception of the revisions approved without condition, discussed above, the remaining revisions are approved for purposes of CWA Section 303(c), subject to successful conclusion of ESA Section 7 consultation. The discussion below identifies the adopted revisions in this category and the basis for EPA’s action.

Aquatic Life Designated Uses

A Class 2 Warm Water aquatic life use was added to Big Thompson segment 13, which previously lacked any aquatic life classification. Aquatic life classifications were also added to certain Outstanding Waters which previously lacked specific designated uses. These adopted revisions are consistent with federal requirements at 40 CFR 131.10 because the adopted designated uses appropriately reflect the existing and potential uses for these waters. EPA approves the adopted revisions to the aquatic life designated uses for individual segments, subject to ESA consultation.

Numeric Standards for the Protection of Aquatic Life Uses

For a number of segments, revisions were adopted to the numeric standards for the protection of aquatic life designated uses. Most notably, a full set of numeric standards for inorganics and metals were applied to a number of segments that previously lacked numeric standards for most parameters. These segments included: Upper South Platte segments 11a, 16a, 16b, and 16c, Cherry Creek segment 4, Clear Creek segments 16 and 18b, Big Dry Creek

segment 1, Boulder Creek segments 8 and 11, Saint Vrain Creek segment 6, Middle South Platte segment 3, Big Thompson segments 6 and 10, Cache La Poudre segments 8 and 13, and Lower South Platte segment 2b. For other segments, site-specific numeric standards for one or more parameters were established as appropriate to protect aquatic life uses.

The Commission also applied the revised aquatic life table value standards for selenium to a number of aquatic life segments. These revised table values were added to the Basic Standards and Methodologies for Surface Waters in January of 1996. The revised aquatic life table value standards for manganese, adopted in August of 2000, were also applied to a number of aquatic life segments. In general, revisions to the numeric standards for the protection of aquatic life were adopted for nearly every segment in the basin.

These revisions are consistent with federal requirements at 40 CFR 131.11 and Section 303(c)(2)(B) of the Act because the adopted numeric standards describe a level of water quality that will protect designated uses. EPA approves all revisions to the numeric standards assigned to protect aquatic life uses, subject to ESA consultation. Note that new or revised ambient-based standards are addressed separately below.

Ambient-Based Numeric Standards

There were no revisions adopted by the Commission that resulted in new or revised ambient-based standards. Ambient-based standards were deleted from Clear Creek segment 3a and 11, Middle South Platte segment 1, Lower South Platte segment 1, and Big Thompson segment 9. The deleted ambient-based standards were replaced with table value standards. For some segments, previously-adopted ambient-based standards were retained without revision.

These revisions to delete ambient-based standards are consistent with federal requirements at 40 CFR 131.11 and Section 303(c)(2)(B) of the Act because the adopted numeric standards describe a level of water quality that will protect designated uses. EPA approves the revisions to ambient-based numeric standards, subject to ESA consultation.

Agriculture Designated Uses

For several segments, the adopted revisions resulted in the addition of the agriculture designated use. For example, the agriculture use was added to Cache La Poudre segment 1 and Laramie River segment 1, two segments which are also Outstanding Waters. These revisions are consistent with federal requirements at 40 CFR 131.10 because the adopted designated uses appropriately reflect the existing and potential uses for these waters. EPA approves, without condition, all revisions to agriculture designated uses.

Numeric Standards for the Protection of Agriculture Uses

For several segments, revisions to the numeric standards for the protection of agriculture uses were adopted. For example, arsenic numeric standards for the protection of agriculture uses were adopted for certain segments because the table value standard for agriculture uses is more stringent than the table value standards for the protection of aquatic life uses. These revisions are consistent with federal requirements at 40 CFR 131.11, because the adopted standards describe a level of water quality that will protect designated uses. EPA approves, subject to ESA consultation, the adopted revisions to numeric standards for the protection of agriculture uses.

Temporary Modifications

For several segments, the Commission adopted new or revised temporary modifications to the underlying numeric standards. In other cases, the Commission decided that previously adopted temporary modifications should be deleted. Temporary modifications are authorized by Colorado's Basic Standards and Methodologies for Surface Waters, and this authorizing provision has been approved by EPA. Segments where new or revised temporary modifications were adopted include Upper South Platte segments 2b, 2c, 15, and 16a, Big Thompson segment 4c, 5, and 9, and Clear Creek segment 13b. EPA approves all revisions to temporary modifications, subject to ESA consultation.

Outstanding Waters

An Outstanding Waters classification was applied to Upper South Platte segment 1b, Bear Creek segment 7, Clear Creek segment 19, Boulder Creek segment 1, St. Vrain segment 1, and Big Thompson segment 1. These revisions are consistent with Colorado's antidegradation rule as contained in the Basic Standards and Methodologies for Surface Waters, which was approved by EPA as consistent with federal antidegradation requirements at 40 CFR 131.12. The Outstanding Waters classifications are approved, subject to ESA consultation.

Use Protected Waters

A Use Protected classification was removed from Clear Creek segment 13. This revision is consistent with Colorado's antidegradation rule as contained in the Basic Standards and Methodologies for Surface Waters, which was approved by EPA as consistent with federal antidegradation requirements at 40 CFR 131.12. All revisions to Use Protected classifications are approved, subject to ESA consultation.

Resegmentation, Renaming, and Consolidation of Segments

Various changes were adopted to re-segment, re-number, and/or re-configure particular segments or to change the description of segments. For example, the description of segments that address "tributaries, lakes and reservoirs" was modified to include wetlands in order to clarify that

tributary wetlands have the same classifications and standards as the tributary streams, lakes, and reservoirs. These revisions were adopted to ensure appropriate protection of wetlands, consistent with the Basic Standards and Methodologies for Surface Waters. Also, some waters were split to reflect differences in the appropriate water quality standards. Segments where such changes were adopted include: Upper South Platte segments 6 and 16, Clear Creek segments 13, 14, 16, 17, and 18b, St. Vrain Creek segment 4, Big Thompson segment 4, Cache La Poudre segments 3 and 4, Middle South Platte segment 3, Lower South Platte segment 2, and Republican River segment 6. EPA approves all re-segmentation, re-naming, and consolidation revisions, subject to ESA consultation.

STATUS OF PREVIOUS EPA DISAPPROVAL ACTIONS

Prior to the revisions that are the subject of today's EPA action, there were 3 unresolved EPA disapproval issues concerning water quality standards in the South Platte River basin. EPA is pleased to note that, as a result of the February 13, 2001 revisions, and the information that was developed in support of those revisions, very significant progress was achieved in resolving these outstanding disapproval actions. Two of the issues were completely resolved and the third issue was resolved for the vast majority of segments that had been disapproved. The current status for the 3 disapproval issues can be summarized as follows:

- **Big Thompson River Segment 13 (Berthoud Reservoir, Johnstown Reservoir):** This segment was disapproved in EPA's July 16, 1992 letter because an aquatic life use was not designated and a use attainability analysis (justifying the omission of an aquatic life use) was not completed. The issue was resolved by applying a Class 2 Warm Water aquatic life classification to this segment. The State's action to apply an aquatic life classification to this segment is approved today.
- **Clear Creek Segment 5 (West Clear Creek from the confluence with Woods Creek to the confluence with Clear Creek):** The site-specific aquatic life standards for manganese were disapproved in EPA's July 24, 1998 letter because they were not sufficiently protective. The issue was resolved by deleting the disapproved standards and applying table values for manganese to this segment. The revised numeric standards for manganese are approved today.
- **Multiple Segments:** A total of 82 segments in the basin with a Class 2 Recreation classification were disapproved in EPA's July 16, 1992 letter because a use attainability analysis (justifying the omission of a Class 2 Recreation classification) was not completed. The issue was partially resolved as a result of use attainability analyses for 18 segments, completed by multiple parties, that justify retaining a Class 2 Recreation classification for all or part of the year. For 2 segments, a Class 2 Recreation classification was retained and a use attainability analysis was completed, but EPA does not agree with the conclusion in the UAA. For these 2 segments, EPA does not consider the disapproval

issue to be resolved. For the remaining disapproved segments, the Commission adopted a Class 1 Recreation classification to resolve the disapproval issue. See the discussion under "Recreation Designated Uses"(beginning on Page 1 of this enclosure), for additional detail on this issue.